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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/966,973	09/28/2001	Dan A. Steinberg	ACT-162 (1117-8)	5813

7590 09/08/2004
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EXAMINER

DOAN, JENNIFER

ART UNIT	PAPER NUMBER
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2874

DATE MAILED: 09/08/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/966,973

Applicant(s)

STEINBERG ET AL.

Examiner

Jennifer Doan

Art Unit

2874

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 15-22 is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 June 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>0504</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Applicants' communication filed on 06/14/2004 has been carefully studied by the Examiner. The arguments advanced therein, considered together with the amendment made to the claims, are not persuasive. In view of further scrutiny of all pending claims with respect to the prior art, it has been discovered that the Yoshida, Shuto and Blonder patents are still pertinent to claims. Thus, the rejections based upon the prior art made of record in the previous Office Action are still maintained. This action is made final.

Examiner does not agree with applicants' arguments in the remarks that Yoshida fails to teach "a frame comprising a flat bottom surface sealed to the upper surface of the substrate, the top surface of the optical fiber being at or below the level of the bottom surface of the frame". In fact, this feature is clearly shown in figures 1, 4 and column 5, line 57-column 6, line 6 of Yoshida.

Information Disclosure Statement

1. The prior art documents submitted by applicant in the Information Disclosure Statement filed on 05/12/2004, have all been considered and made of record (note the attached copy of form PTO-1449).

Drawings

2. The drawings, filed on 06/14/2004, are accepted.

Specification

3. Applicants' cooperation is requested in correcting any errors of which applicants may become aware in the specification.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 1, 2, 6 and 9-12 are rejected under 35 U.S.C. 102(e) as being anticipated by Yoshida et al. (U.S. Patent 6,632,027).

Regarding claims 1 and 2, Yoshida et al. disclose (in figures 1-5) an optical device package comprising a substrate (140) having an upper surface and an elongated linear groove (141) for receiving an optical fiber (130) (column 3, lines 3-17); an optical fiber (130) positioned within the groove (141) in the substrate (140) and having a top surface; and a frame (160) sealed to the upper surface of the substrate (140) and having a flat bottom surface, the top surface of the optical fiber (130) being at or below the level of the bottom surface of the frame (as shown in figures 4 and 5); further comprising a lid (190) having a plate of fluid material which is selected from the group

consisting of silicon, glass, ceramic and metal (column 3, lines 6-7) and bonded to the frame to cover the frame.

Regarding claim 6, Yoshida et al. further disclose (figure 1 and 4) the substrate (140) has a distal end and a proximal end and the optical fiber (130) extends from a recess to at least the distal end of the substrate (140); wherein the recess is receiving an optical semiconductor component (110) and the frame (160) is configured to engage the recess.

Regarding claim 9, Yoshida et al. further disclose the substrate is fabricated from single crystal silicon (column 3, lines 58-59).

Regarding claims 10-12, Yoshida et al. further disclose (figure 1-5) an optical semiconductor component (110) is selected from the group consisting of a laser diode, light emitting diode and photodetector (column 3, lines 45-48) and mounted to the substrate (140) (column 3, lines 15-16); wherein the optical semiconductor component has an active area positioned below the upper surface of the substrate (column 4, lines 4-7).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

invention was made to a person having ordinary skill in the art to which said subject matter pertains.

Patentability shall not be negated by the manner in which the invention was made.

7. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

8. Claims 3-5, 7, 8 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yoshida et al. (as cited above) in view of Shuto et al. (U.S. Patent 6,585,426).

Yoshida et al. disclose all the limitations of the claimed invention except for the frame including a single piece member having band-like structure defining an opening as recited in claims 3 and 14. However, this feature is well known in the art as taught by Shuto et al. Shuto et al. teach (in figure 1) a frame (92) including a single piece member having band-like structure defining an opening. Such an element would advantageously provide the package with more attachment and protection. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the Yoshida device with a frame having the above features (accordance with the teaching of Shuto et al.). Doing so would facilitate the manufacture of the package for the optical devices with low-cost and more reliable.

9. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yoshida et al. (as cited above) in view of Blonder et al. (U.S. Patent 4,897,711).

Yoshida et al. disclose all the limitations of the claimed invention except for the substrate possessing a reflecting surface for reflecting optical signals between the optical fiber and the active area. However, this feature is well known in the art as taught by Blonder et al. Blonder et al. teach the substrate possessing a reflecting surface for reflecting optical signals between the optical fiber and the active area (in column 4, lines 7-17). Such an element would advantageously capture the desirable light beams. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the Yoshida device with a reflector on the substrate (accordance with the teaching of Blonder et al.). Doing so would facilitate the manufacture of the package for the optical devices with low-cost, more reliable and reduce the optical transmission loss.

Allowable Subject Matter

10. Claims 15-22 are allowed.

The prior art fails to disclose or reasonably suggest a method for making an optical device package having a step of forming at least one electrical lead on the substrate, wherein the electrical lead extends at least from the recess to the proximal end of the substrate.

Conclusion

11. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jennifer Doan whose telephone number is (571) 272-2346. The examiner can normally be reached on Monday to Thursday from 6:00 am to 3:30 pm, second Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rodney Bovernick can be reached on (571) 272-2344. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR.

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Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Jennifer Doan

Patent Examiner

September 1, 2004



PHAN T. H. PALMER
PRIMARY EXAMINER